



GENERAL NOTES:

- CONNECT ALL EXIT AND BATTERY POWERED BALLASTS TO AN UNSWITCHED HOT CONDUCTOR.
- ALL LOW VOLTAGE LIGHTING CONTROL CABLING SHALL BE PROVIDED IN CONDUIT, 5 #16, 1/2" C., UNO.
- SHOP AREA 110, EG LAB 112, AND TOILET 108 SHALL BE CLASSIFIED AS A CLASS 1, DIV. 1 HAZARDOUS AREA IN ANY PITS OR DEPRESSIONS EXTENDING BELOW FINISHED FLOOR, AND AS CLASS 1, DIV. 2 FROM FINISHED FLOOR TO 18" AFF. ALL COMPONENTS SHALL MEET THE APPROPRIATE NEC REQUIREMENTS.
- ALL CONDUITS IN SHOP AREA 110 AND EG LAB 112 SHALL BE RGSC WITH THREADED FITTINGS.
- ALL CONDUITS SHALL BE ROUTED OVERHEAD, UNO.
- NO CONDUIT SHALL BE ROUTED IN OR BELOW SLAB, UNLESS SPECIFICALLY NOTED OTHERWISE.

KEYED NOTES:

- SWITCH INNER AND OUTER LAMPS SEPARATELY THIS ROOM.
- PHOTOCELL MOUNTED 11'-6" AFF, FACING NORTH. RE: "PHOTOCELL DETAIL," G/E-402. WIRE TO RELAY PANEL "LRP".
- MOUNT EMERGENCY LIGHT TO WALL 8'-0" AFF.
- FIXTURE MOUNTED ON WALL AT 23'-0" AFF.
- LOCATE FIXTURE IN CLEAR VIEW OF AUTOMATIC TRANSFER SWITCH "ATS-2."
- MOUNT FIXTURE TO CEILING.
- EMERGENCY LIGHT "EM2." MOUNT FIXTURE ON WALL ABOVE DOOR.
- MOUNT EMERGENCY LIGHT TO STRUCTURE.
- RE: DETAIL C/E-402.
- RE: DETAIL D/E-402.
- RE: DETAIL E/E-402.
- 3 #16, 1/2" C.
- SWITCH FOR LOCAL CONTROL OF CANOPY LIGHTS.
- SWITCH FOR LOCAL CONTROL OF MECHANICAL LIGHT LIGHT.
- HOMERUN TO LRP(S6,S7).

PARTIAL LEGEND:

- INFRARED SENSOR WITH SWIVEL BASE. MOUNTED ON CEILING. WATT STOPPER #CX-105. RE: DETAIL B/E-402.
- CEILING MOUNTED DUAL TECHNOLOGY SENSOR. WATT STOPPER #DT-305. RE: DETAIL A/E-402.
- WALL BOX MOUNTED TIMER SWITCH. WATT STOPPER #TS-400-I.
- WALL BOX MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR. WATT STOPPER #DW-100-I.
- POWER PACK MOUNTED ABOVE ACCESSIBLE CEILING. WATT STOPPER #BZ-100.
- EMERGENCY LIGHTING CONTROL UNIT IN NEMA 1 BOX MOUNTED ABOVE ACCESSIBLE CEILING. WATT STOPPER #ELCU.
- NORMAL POWER CIRCUITING.
- EMERGENCY POWER CIRCUITING ROUTED IN SEPARATE CONDUIT FROM NORMAL POWER.

OCCUPANCY SENSOR NOTES:

- EXACT MOTION SENSOR LOCATIONS AND AIMING SHALL BE DETERMINED BY THE MANUFACTURER'S SPECIFICATIONS AND BASED ON FINALIZED DUCTWORK AND FURNITURE PLANS.
- ULTRASONIC OR DUAL TECHNOLOGY SENSORS SHALL NOT BE MOUNTED CLOSER THAN 6'-0" FROM AIR SUPPLY OR RETURN REGISTERS.
- CONTRACTOR SHALL ADJUST SENSORS FOR OPTIMUM PERFORMANCE.

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LOW VOLTAGE RELAY PANEL "LRP"				
RELAY	CIRCUIT	LOAD CONTROLLED	SWITCH/SENSOR	REMARKS
R1	1N4A-1	EG LAB AND SHOP AREA INNER LAMPS	SWITCH S1	NOTE 6
R2	1N4A-1	EG LAB AND SHOP AREA OUTER LAMPS	SWITCH S2	NOTE 6
R3	1N4A-3	UPS/BATTERIES LAB INNER LAMPS	SWITCH S3	NOTE 6
R4	1N4A-3	UPS/BATTERIES LAB OUTER LAMPS	SWITCH S4	NOTE 6
R5	1N4A-7	WAREHOUSE/STORAGE 101 INNER LAMPS	SWITCH S5	NOTE 6
R6	1N4A-7	WAREHOUSE/STORAGE 101 OUTER LAMPS	SWITCH S6	NOTE 6
R7	1N4A-9	TEST, MOD. KITS, JAN., HALL, FIRE RISER	NONE	NOTE 6
R8	1N4A-9	EXTERIOR WALL PACKS, CANOPY LIGHTS	NOTE 4	NOTE 7
R9	1N4A-11	PARKING LOT	NOTE 4	NOTE 7
R10		SPARE		
R11		SPARE		
R12		SPARE		
R13		SPARE		
R14		SPARE		
R15		SPARE		
R16	1E4A-4	EXTERIOR EMERGENCY EGRESS LIGHTS	NOTE 4	INPUT A, NOTE 7
R17		SPARE		
R18		SPARE		
NS1	1N4A-1	HOT FOR ELCU-100 NORM. POWER SENSING		NOTE 1
NS2	1N4A-3	HOT FOR ELCU-100 NORM. POWER SENSING		NOTE 1
NS3	1N4A-7	HOT FOR ELCU-100 NORM. POWER SENSING		NOTE 1
NS4	1N4A-9	HOT FOR ELCU-100 NORM. POWER SENSING		NOTE 1

RELAY PANEL "LRP" NOTES:

- NONSWITCHED CIRCUITS SHALL PASS THROUGH RELAY PANEL DIRECTLY TO PANELBOARD, AND SHALL NOT BE SWITCHED BY A RELAY.
- PROVIDE PHOTOCELL COMPATIBLE WITH RELAY PANEL.
- PROVIDE ASTRONOMIC TIME CONTROL MODULE.
- PHOTOCELL ON/TIME SWITCH OFF.
- INPUT "A" SHALL BE CONNECTED TO AN AUXILIARY CONTACT IN ATS2. LIGHTS SHALL BE FORCED ON UPON LOSS OF NORMAL POWER. PROVIDE TIME DELAY RELAY IF REQUIRED FOR THE CONTROL PANEL TO ACKNOWLEDGE THE "EMERGENCY ON" COMMAND.
- CIRCUIT SHALL BE ACTIVE FROM 6 AM TO 6 PM. AT END OF DAY PROVIDE FLICK WARN. TIME SHALL BE EXTENDED BY ANY ONE OF THESE SWITCHES: LRP(S5), LRP(S6), LRP(S7).
- DO NOT FLICK WARN THIS CIRCUIT.
- PROVIDE WARNING LABEL TO READ: "THIS PANEL IS SERVED FROM PANELS "1N4A" AND "1E4A"
- RE: "LOW VOLTAGE LIGHTING RELAY PANEL DETAIL," F/E-402.
- PROVIDE JOHNSON CONTROLS METASYS BUILDING CONTROL INTERFACE MODULE FOR DIRECT CONTROL FROM DATA BUS.
- CONNECT TO JOHNSON CONTROLS METASYS SYSTEM DRY CONTACT FOR FLICKWARN TO OFF.
- PANEL SHALL BE WATT STOPPER OR GE TLC.

LIGHTING FIXTURE SCHEDULE

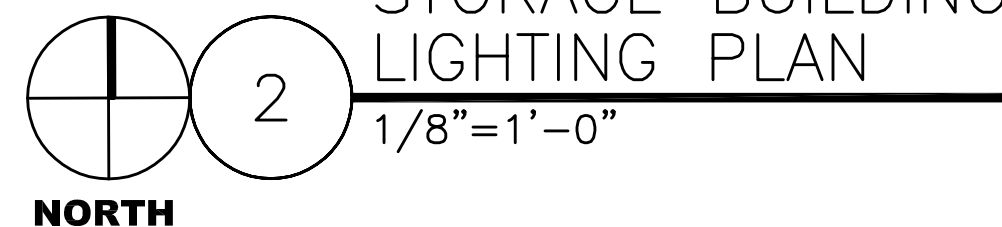
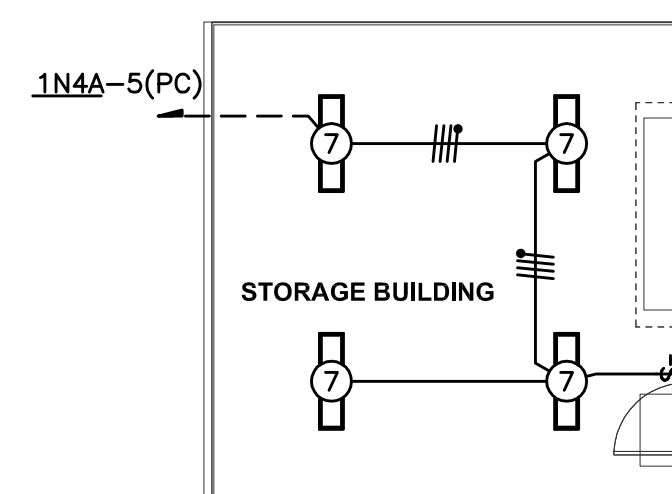
FIXTURE TYPE	DESCRIPTION	VOLTAGE	MOUNTING	LAMPS (G.E. NUMBER)	NOTES
1	4' FLUORESCENT HIGH BAY FGB164 4 54T5HO N1X20U ACL M/VOLT GEB10PS PAF	277	SUSPEND 16'-0" AFF	4 - F54WTS/841/ECO	*1
2	2'X4' FLUORESCENT TROFFER, 2 LAMP, 1.0 BALLAST FACTOR LITHONIA #2SP5 G 2 28T5 A12125 M/VOLT GEB10PS	277	CEILING GRID	2 - F28WTS/841/ECO	*2
3	2'X4' FLUORESCENT TROFFER, 2 LAMP, 1.15 BF, STEPPED DIMMING LITHONIA #2SP5 G 3 28T5 A12125 M/VOLT GEB115S	277	CEILING GRID	3 - F28WTS/841/ECO	*2
4	4' FLUORESCENT WALL BRACKET NULITE #BW-228T5-277-PSN-WH-UP-EM277	277	WALL MOUNT ABOVE MIRROR	2 - F28WTS/841/ECO	
5	COMPACT FLUORESCENT SHOWER LIGHT LITHONIA #L6F 26TRT M/VOLT 6LD1	120	SHEETROCK	1 - F26DBX/E/841/ECO	
6	4' FLUORESCENT STRIP LITHONIA #Z 2 28T5 M/VOLT GEB10PS	277	ABOVE DOOR	2 - F28WTS/841/ECO	
7	4' INDUSTRIAL FLUORESCENT WITH WIRE GUARD LITHONIA #EJ 3 28T5 277 1/3 GEB10PS WGEJZ	277	SUSPEND 9'-0" AFF	3 - F28WTS/841/ECO	
8	1'X4' FLANGED MOUNTED RECESSED FLUORESCENT TROFFER LITHONIA #SP5 F 2 28T5 A12125 M/VOLT GEB10PS	120	SHEETROCK	2 - F28WTS/841/ECO	
9	EXTERIOR COMPACT FLUORESCENT WALL PACK LITHONIA #WSTM42TRT MD 277 DNAT L/LP	277	7'-4" AFF BOF	1 - F42TBX/841/ECO	*4
10	COMPACT FLUORESCENT DOWNLIGHT GOTHAM #AFV 42TRT 8AR 277	277	SOFFIT	1 - F42TBX/841/ECO	
11	EXTERIOR HPS WALL PACK LITHONIA #WST 70S FT 277 DNAT L/LP	277	WALL MOUNT 20'-0" AFF TOF, UNO	1 - LU70/MED/ECO	*4
12	EXTERIOR HPS WALL PACK LITHONIA #TW2F 200S 277 DNAT L/LP	277	WALL MOUNT 16'-0" AFF TOF	1 - LU200/ECO/INC	
EM1	THERMOPLASTIC EMERGENCY LIGHT WITH 5.4W HALOGEN LAMPS LITHONIA #ELM2	277	SURFACE MOUNT 8'-0" AFF	PROVIDED	
EM2	HAZARDOUS AREA EMERGENCY LIGHT LITHONIA #ELM2	277	RE: PLANS	PROVIDED	
X1	SINGLE FACE LED EXIT LIGHT LITHONIA #LE S W 1 R 120/277 EL N SD	277	ABOVE DOOR, UNO	PROVIDED	
P1	400W HPS SHOEBOX LITHONIA #KV2 400S SR4WFL 277 RP09 L/LP	277	POLE	1 - LU400	*3
P2	250W HPS SHOEBOX LITHONIA #KV2 250S SR3LP 277 RP09 L/LP	277	POLE	1 - LU250	*3

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

- ALL FLUORESCENT BALLASTS SHALL BE ELECTRONIC, UNO.
- A SINGLE BALLAST SHALL BE PROVIDED FOR EACH FIXTURE, UNO.
- ALL ELECTRONIC BALLASTS SHALL OPERATE AT NOT MORE THAN 10% TOTAL HARMONIC DISTORTION (THD).
- ALL ELECTRONIC BALLASTS SHALL HAVE A NOMINAL BALLAST FACTOR OF 0.875 OR GREATER.
- ALL BALLASTS (FLUORESCENT & HID) SHALL BE HIGH POWER FACTOR.
- COORDINATE LAY-IN FIXTURES WITH CEILING GRID SIZE AND STYLE PROVIDED.
- ALL COMPACT FLUORESCENT BALLASTS SHALL BE PROVIDED WITH "END OF LIFE" SHUTDOWN PROTECTION.

LIGHTING FIXTURE SCHEDULE KEYED NOTES:

- WHERE PLANS CALL FOR MULTI-LEVEL SWITCHING, PROVIDE FIXTURES WITH SEPARATE BALLASTS FOR INBOARD AND OUTBOARD LAMPS.
- WHERE PLANS CALL FOR MULTI-LEVEL SWITCHING, PROVIDE FIXTURES WITH STEP DIMMING BALLASTS FOR DUAL-LEVEL SWITCHING.
- PROVIDE 35' ROUND TAPERED STEEL POLE, LITHONIA #RTS 35-73B DM19 DDB
- COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECT.



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100% SUBMITTAL				
REV	DATE	DESCRIPTION	CHECK	APP'D
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION MIKE MONRONEY AERONAUTICAL CENTER - OKLAHOMA CITY, OKLAHOMA				
PSL - POWER SERVICES LABORATORY				
LIGHTING PLAN				
Construction Work Request No: 09-018745				
PREPARED BY Rees Associates		APPROVED BY Jon Berkman		
DESIGNED JGH	ISSUED BY OFFICE OF FACILITY MANAGEMENT	DATE May 26, 2011	DRAWING NO. E-401	
DRAWN BLP	AMF-400	08-008257	13 of 31	